

Appl. No. 10/707,703
Amdt. dated February 23, 2005
Reply to Office action of December 02, 2004

REMARKS

The claims are not amended, and are listed above only for convenience to the Examiner.

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1. Allowable subject matter:

Claims 6-11.

10 *Claim 5 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.*

15 The Applicants note the Examiner's comments regarding allowable subject matter upon second consideration of the instant application.

2. Claim rejections - 35 USC § 103:

20 *Claims 1-4 are rejected under 35 USC 103 (a) as being anticipated by Goo (U.S. Patent 5,677,215) in view of Guterman (U.S. Patent 4,422,092).*

Response:

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The Examiner's stated reason for allowance of claim 5 is that "the prior art failed to establish the high density ROM structure with the required diode structure."

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The Applicants contend that the diode structure is already inherently present in claims 1-4. A diode structure is basically a junction of P and N type materials. The first and second conductive types recited in claim 1 would be understood by one of ordinary skill in the ROM/semiconductor art to mean the exceedingly well-known P or N type materials; there are no other well-known "types" of conductive materials in this art. Moreover P and N type materials are explicitly recited in claims 3 and 4. Therefore, claims 1-4 already include the diode structure.

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For this reason, the Applicant argues that the stated reason for allowance actually also applies to claims 1-4, particularly claims 3 and 4 that explicitly call for P and N type materials. Therefore, claims 1-5 should all be found allowable under the Examiner's stated reason for allowance of claim 5.

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Regarding the rejection of claims 1-4 based on pluralizing of elements, the Applicants argue that the invention is not obvious given the combination of art. While the P-N junction of Goo's device does indeed inherently act like a diode, neither Goo nor Guterman recognize that the diode effect means that "a plurality of drain signals respectively passing through the plurality of heavily doped regions do not interfere with each other" (from claim 5, but inherent to claims 1-4). That is, neither Goo nor Guterman suggest taking advantage of the diode effect to pluralize the first heavily doped region of Goo. The Applicants suppose that the Examiner may be using hindsight afforded by the invention to justify the rejection.

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In addition, the Examiner's stated motivation for making the combination is unsupported. Neither Goo nor Guterman suggest that a plurality of heavily doped regions would result in "a ROM structure with better functionality". More to the point, 5 "better" is ambiguous. Does the Examiner mean to say that the combination better allows the "transistor [to] be easily fabricated and be used for very large scale integration" (col. 2 lines 27-28 of Goo)? In contrast, the Applicants maintain that in the process of developing the instant invention, they 10 themselves recognized that they could better the state-of-the-art by teaching the capability to store more than one bit.

The Applicants therefore assert that claims 1-4 of the present 15 invention are not obvious given the combination of Goo in view of Guterman.

Reconsideration of claim 1 is respectfully requested in view of the above discussion. Claims 2-4, being dependent upon 20 claim 1, should be allowed if claim 1 is found to be allowable.

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Sincerely yours,

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